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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/338,035	06/22/1999	HENRY ESMOND BUTTERWORTH	UK999026	9863

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EXAMINER
TANG, KENNETH

ART UNIT	PAPER NUMBER
2127	

DATE MAILED: 02/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/338,035	BUTTERWORTH, HENRY ESMOND	
	Examiner	Art Unit	
	Kenneth Tang	2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 June 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This final action is in response to paper number 5, "Response to Application," which was received on December 11, 2002. Applicant's arguments have been fully considered but they are not deemed to be persuasive. Claims 1-10 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3-4, 6, and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gulsen (US 5,727,211) in view of Kirk (US 5,875,464).

Referring to claims 1 and 8-9, Gulsen discloses a method and system for processing tasks in a data processing system ("data processing system", col 3, lines 23-34) including:

- an instruction cache ("instruction cache", col 3, lines 23-27);
- each task type having code associated with it ("one code segment per task", col 7, lines 44-45);

Gulsen fails to explicitly teach:

- tasks of different types are defined in the system

However, Kirk teaches executing tasks with different legal partition sizes. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of having tasks of different types for the reason of making the existing system more versatile by having more variety of tasks.

Gulsen also fails to explicitly teach:

- tasks being processed in order by loading the associated code into the instruction cache for execution on the microprocessor

Kirk also teaches a processor which executes instructions for using a cache to load the tasks (processor, cache, tasks, execution, col 17, lines 55-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of processing tasks into the cache for execution for the reason of increasing speed and productivity of the system. Memory caching is effective because most programs access the same data or instructions over and over.

Gulsen also fails to explicitly teach:

- placing the tasks of at least one task type into a batch such that the tasks in a batch are processed before processing the next ordered task

Kirk also teaches using instructions or tasks in a batch processing system . It would be obvious to process tasks into the batch one at a time to maintain order. It is common knowledge that a batch processing system can process at least one task. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of processing tasks (of at least one task type) into a batch one

at a time for the reason of improving efficiency. Batch files are useful for storing sets of commands that always execute together.

Referring to claim 3, Kirk discloses the following when the task is not capable of being loaded into the cache as a whole:

- the code being logically divided at one or more break points into two or more portions ("cache partitioned evenly among 8 tasks", col 17, lines 55-57);
- responding to a break point defined within a first portion of the code to schedule a further task for future execution of a second portion of the code ("two tasks", "shared partition", "map to 1 00aa aaaa aaaa aaaa", "map to 0 0aaa aaaa aaaa aaaa) col 23 lines 64-67 and col 24, lines 1-5, and Fig. 13).

It is inherent to execute existing tasks in the future that have not been executed yet.

Referring to claim 4, Kirk discloses the following:

- a further scheduled task placed in a batch (from the rejections stated in claims 1 and 3);

It is well known that batch files are useful for storing sets of commands that always execute together. Therefore, it would be obvious to place tasks in the batch with like tasks.

Referring to claim 6, it would be obvious to place a task in a batch at the same time that it is scheduled for the reason of increasing the speed of the processing.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulsen (US 5,727,211) in view of Kirk (US 5,875,464) and in further view of Peters (US 6,332,167 B1).

Referring to claim 2, Kirk teaches the following:

- tasks being processed in order by loading the associated code into the instruction cache for execution on the microprocessor (from the rejection of claim 1 as stated above)

Gulsen in view of Kirk fails to explicitly teach:

- executing the loaded code to process the further task where there is a further task of like type in the batch

However, as stated in the rejection of claim 1, it is obvious to have a more than one similar task (or a "further task") in a batch system. From the reference of Peters, it is common knowledge that "batch processes are performed in a task oriented manner" (col 2, lines 41-42).

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being obvious over Gulsen (US 5,727,211) in view of Kirk (US 5,875,464) and in further view of Nilsen (US 6,438,573).

Referring to claim 5, Gulsen in view of Kirk fails to explicitly teach having each portion of code define an atomic operation. However, Nilsen "shows a code fragment which describes an atomic segment of code" (col 4, lines 32-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include

the feature of atomicity to the existing system of Gulsen in view of Kirk for the reason of making the system more reliable. Atomicity is beneficial because it assures that the operation follows through completely and accurately or not at all.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being obvious over Gulsen (US 5,727,211) in view of Kirk (US 5,875,464) and in further view of Servi (US 5,381,546).

Referring to claim 7, Gulsen in view of Kirk fails to explicitly teach having queues to manage the tasks. However, the reference of Servi illustrates that it is common knowledge that "different queues" could manage "different types of tasks" (col 2, lines 12-15) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature to the existing system for the reason of having a data structure to better organize the information.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulsen (US 5,727,211) in view of Kirk (US 5,875,464) and in further view of Bourekas (US 6,128,703).

Referring to claim 10, from the reference of Bourekas, it is common knowledge for a data processing apparatus to have the microprocessor and cache embodied on a single chip ("In many modern microprocessors the primary cache 208 is on the same chip with the CPU 204", col 1, lines 61-63).

ARGUMENTS

7. Applicant argues on paragraph 2 of page 2 that the reference of Gulsen "has nothing to do with applicant's claimed invention." In response, Examiner respectfully disagrees. Gulsen is in the same field of endeavor of data processing and task management. Applicant is directed to paragraph #2.

8. Applicant argues on paragraph 2 of page 2 that Kirk fails to correct the deficiencies of the Gulsen patent. Specifically, Kirk fails to disclose applicant's claim method step of:

- "placing the tasks of at least one task type into a batch such that the task in a batch are processed before processing the next ordered task"

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Kirk teaches using instructions or tasks in a batch processing system . It would be obvious to one of ordinary skill in the art at the time the invention was made to process tasks into the batch one at a time to maintain order. It is common knowledge that a batch processing system can process at least one task. Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to include the feature of processing tasks (of at least one task type) into a batch one at a time for the reason of improving efficiency. Batch files are useful for storing sets of commands that always execute together.

9. Applicant argues on paragraph 2 of page 2 that Kirk fails to correct the deficiencies of the Gulsen patent. Specifically, Kirk fails to disclose applicant's claim method step of:

- a program code means comprising "code means for scheduling tasks of like type into a batch such that tasks in a batch are processed before processing the next ordered task";

In response, Applicant is directed to #8. In addition, it is inherent that there is a computer software program means that performs the limitation argued in #8.

10. Applicant argues on paragraph 2 of page 2 that Kirk fails to correct the deficiencies of the Gulsen patent. Specifically, Kirk fails to disclose applicant's claim method step of:

- "means for scheduling tasks of like type into a batch, wherein the means for processing the tasks is operable to process the tasks in a batch before processing the next ordered task."

In response, Applicant is directed to #8 and #9.

11. Applicant argues on paragraph 1 of page 3 that the Examiner mentioned that Kirk is being cited for the teachings of instructions or tasks in a batch processing system and that it would be obvious to process tasks into the batch one at a time to maintain order. Applicant is arguing that Kirk only teaches that his patent evaluated the process by using an address trace technique in batch processing. In response, Applicant is directed to #8.

12. Applicant argues on paragraph 2 of page 3 that Peters, Nilsen, Servi and Bourekas all fail to correct the deficiencies of the Gulsen patent. However, Applicant fails to provide any support for this argument and is therefore not found to be persuasive.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached on 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alvin Oberley can be reached on (703)305-9716. The fax phone numbers for the organization where this application or proceeding is assigned are none for regular communications and none for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is none.

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February 10, 2003

MAJID BANANKHAH
PRIMARY EXAMINER